CLAIMS

What is claimed as being new and desired to be protected by LETTERS PATENT of the United States is as follows:

1. A manufactured building system for constructing prefabricated homes that can be easily transported and assembled comprising, in combination:

a pair of multi-stemmed pre-stressed concrete floor systems each having a generally rectangular configuration with an up side and a down side and a thickness there between, each multi-stemmed floor system having two parallel side edges and two parallel end edges, one end edge being the front end and one end edge being the rear end, with each system having a downwardly disposed short front reinforced diaphragm header and a parallel downwardly disposed rear reinforced diaphragm header and a plurality of long downwardly disposed stems there between, all stems being perpendicular to the diaphragm headers, with two of the stems being located on and contiguous with the side edge of the multi-stemmed floor system and forming the edge of each floor system, the side edge being configured to contact the side edge of another floor system to form a central joining edge of the coupled floor systems;

a plurality of vertically disposed wall panels associated with the peripheral edges, the wall panels extending upwardly from both the front and rear edges and the side edges remote from the central joining edge when the two floor systems are adjacent

to each other for defining a closed space, the wall panels also having window openings and door openings;

a plurality of base connectors positioned at the lower edges of the wall panels, each base connector having a first end with generally U-shaped flat faces receiving the wall panels adjacent to their lower edges, each base connector also having a second end with components fix ably positioned with respect to a multi-stemmed concrete floor system;

four corner connectors coupled to adjacent vertical edges of the wall panels above the corners of the floor systems, each corner connector constructed of fixed first component having U-shaped flat faces secured to the adjacent vertical edges of the wall panels, each first component having a central cylindrical recess and an exterior arcuate first plate, each corner connector also having an intermediate second component in a generally H-shaped configuration with interior cylinders rotatably received within the cylindrical recesses and with arcuate second plates in sliding contact with the first plates and with bolts fix-ably coupling the arcuate plates at a predetermined angular orientation;

a pair of roof diaphragms each with a periphery there around and intermediately angled with respect to each other to form a linear ridge at the top parallel with and above the central joining edge of the coupled floor systems when the two roof diaphragms are laterally aligned;

an adjustable roof ridge connector constructed of fixed first components having U-shaped flat faces secured to the adjacent edges of the roof diaphragms, each first component having a central cylindrical recess and an exterior arcuate first plate, each roof ridge connector also having an intermediate second component in a generally H-shaped configuration with interior cylinders rotatably received within a cylindrical recess and with arcuate second plates in sliding contact with the first plates and with bolts fix-ably coupling the arcuate plates at a predetermined angular orientation;

a pair of adjustable eave connectors position between the upper edges of the wall panels and the roof diaphragms, each eave connector having a first component having a flat face coupled to a roof panel with a central cylindrical component and an exterior first arcuate plate and with a second component having a U-shaped flat face secured to the adjacent upper edge of the wall panels with a central cylindrical recess and a second exterior arcuate plate in sliding contact with the first plate, each adjustable eave connector having a bolt fix-ably coupling the arcuate plates at a predetermined angular orientation;

a pair of gable end walls with a periphery there around and intermediately angled with respect to each other to form a linear ridge at the top when the two gable end walls are aligned; and

a plurality of gable end connectors, each gable end connector being in a C-shaped configuration with oppositely extending apertured flanges running parallel with the C-shaped

channels, bolts passing through the roof diaphragms and flanges to fix-ably connect the roof diaphragms to the gable end connectors, another bolt extending through the C-shaped channel and the vertical gable end wall for fixable coupling there between.

a Self Mating Edge Adapter that is assembled in two L-shaped halves that connect to the vertical edge of building panels according to the design of the panels to which it is fitted, each half of the SMEA is fitted around the longitudinal edge of two opposing panels and is permanently attached to the panel with mechanical or chemical fasteners, the edges being permanently joined with an integral snap fit design, the two L-shaped halves forming an integral rectangular or square extrusion permanently positioned between and joining the two opposing composite building panels.

2. A manufactured building system comprising, in combination:

a pair of multi-stemmed self-trailing concrete floor systems each having a generally rectangular configuration with a downwardly disposed short front diaphragm header and a parallel downwardly disposed rear diaphragm header and a plurality of long downwardly disposed stems and there between the system having side edges to allow the coupling of more than one floor system;

a plurality of vertically disposed wall panels associated with the peripheral edges extending upwardly from the edges remote from the central joining edge when the two floor systems

are adjacent;

a plurality of base connectors positioned at the lower edges of the wall panels and fix-ably positioned with respect to the multi-stemmed floor system for coupling the wall panels to the floor systems;

four corner connectors coupled to adjacent vertical edges of the wall panels above the corners of the floor systems being fix-ably coupled at a predetermined angular orientation to form continuous walls;

a pair of roof diaphragms each with a periphery there around and intermediately angled with respect to each other to form a linear ridge at the top parallel with and above the central joining edge of the slabs when the two roof diaphragms are laterally aligned;

an adjustable roof ridge connector and eave connectors and with securement members maintaining the roof diaphragms at a predetermined angular orientation;

a pair of adjustable eave connectors positioned between the upper edges of the wall panels and the roof diaphragms at a predetermined angular orientation;

a pair of gable end walls forming a linear ridge at the top when the two gable end walls are aligned; and

a plurality of gable end connectors

a self-mating edge adapter positioned between the two halves of a gable end wall and locking the two halves together.

3. The system as set forth in claim 2 wherein the components of the system are fabricated of fireproof materials.

4. The system as set forth in claim 2 wherein the components of the system are fabricated of termite and insect proof materials.

5. The system as set forth in claim 2 wherein the components of the system are constructed of a composite material.

6. The system as set forth in claim 2 wherein the system insulation rating of the exterior walls and roof is at least R-24.

7. The system as set forth in claim 2 wherein the system is constructed with cathedral ceilings throughout, enabling the air conditioning and heating system to work within the entire building envelope thereby enhancing the overall energy efficiency.

8. The system as set forth in claim 2 wherein the system is constructed with a new and innovative multi-stemmed pre-stressed concrete floor system.

9. The system as set forth in claim 2 wherein the system is transportable.

10. The system as set forth in claim 2 wherein the system is self-trailing.

11. The system as set forth in claim 2 wherein the system components are fabricated of recyclable material.

12. A building system for coupling adjacent vertical edges of panels in a more safe, secure, economical and convenient manner comprising, in combination:

a plurality of panels formed of elastomeric foam, each panel being in a rectangular configuration with an upper edge and a parallel lower edge and with an inner side edge and a parallel outer side edge there between, the upper and lower edges being shorter than the inner and outer edges, each panel having an exterior face and a parallel interior face with a light gauge steel or aluminum cladding secured thereto, one side edge of each panel being in facing relationship with the other side edge of an adjacent panel, each panel having one side edge formed with two vertically extending small parallel recesses along the entire length thereof and one vertically extending large edge projection along the entire length thereof, each panel having the other side edge formed with two vertically extending small parallel projections along the entire length thereof and one vertically extending large edge recess along the entire length thereof, the projection and recesses of the one side edge being mutually aligned with the projections and recess of the other side edge;

a first plate formed with two vertically extending small parallel projections along the entire length thereof positioned within the recesses of the one side edge and one vertically extending large edge projection along the entire length thereof within the edge recess of the other side edge, the first plate having a small spear-shaped projection facing outwardly there

from adjacent one face and a large spear-shaped projection facing outwardly there from adjacent to the other face;

a second plate formed with two vertically extending small parallel projections along the entire length thereof positioned over the projections of the other side edge and one vertically extending large edge recess along the entire length thereof within the edge recess of the other side edge, the second plate having a small spear-shaped projection facing outwardly there from adjacent one face and a large spear-shaped projection facing outwardly there from adjacent to the other face, the large spear-like projection of each plate being in coupling relationship with the small spear-like projection of each adjacent plate during the mutual coupling of the panels with respect to each other;

a plurality of screws along the length of each plate extending through the small recesses and small projections and into the foam for coupling each plate to its associated panel along each side edges thereof;

a C-shaped channel formed along the central extent of each plate extending inwardly into the foam for increase strength during operation and use,

an elongated channel in a square configuration between the plates, and

two parallel rigid strips between the plates in facing contact therewith and having L-shaped supports formed in the plates.

13. A building system for coupling adjacent vertical edges of panels comprising, in combination:

a plurality of panels formed of elastomeric foam, each panel being in a rectangular configuration thereto, one side edge of each panel being in facing relationship with the side edge of an adjacent panel, each panel having one side edge formed with two vertically extending small parallel recesses and one vertically extending large edge projection, each panel having the other side edge formed with two vertically extending small parallel projections and one vertically extending large edge recess;

a first plate formed with two vertically extending small parallel projections within the recesses of the one side edge and one vertically extending large edge projection, the first plate having at least one spear-shaped projection; and

a second plate formed with two vertically extending small parallel projections positioned over the projections of the other side edge and one vertically extending large edge recess within the edge recess of the other side edge, the second plate having at least one small spear-shaped projection, the large spear-like projection of each plate being in coupling relationship with the small spear-like projection of each adjacent plate.

14. The building system as set forth in Claim 12 and further including a plurality of screws along the length of each plate extending through the small recesses and small projections and into the foam for coupling each plate to its associated panel along each side edges thereof.

15. The building system as set forth in Claim 12 and further including a C-shaped channel formed along the central extent of each plate extending inwardly into the foam for increase strength during operation and use.

16. The building system as set forth in Claim 12 and further including an elongated channel in a square configuration between the plates.

17. The building system as set forth in Claim 12 and further including two parallel rigid strips between the plates in facing contact therewith and having L-shaped supports formed in the plates.

18. A transportable multi-stemmed pre-stressed concrete floor system for manufactured buildings comprising, in combination:

a pair of multi-stemmed concrete floors with each multi-stemmed floor having a generally rectangular configuration with an up side and a down side and a thickness there between, each multi-stemmed floor having two parallel side edges and two parallel end edges, one end edge being the front end and one end edge being the rear end, with each multi-stemmed floor having a downwardly disposed short front diaphragm header and a parallel downwardly disposed rear diaphragm header and a plurality of long downwardly disposed stems there between, all stems of each multi-stemmed floor being perpendicular to the diaphragm headers and all stems having a pair of stressing cables running the length of the stems and through the front diaphragm header and through the

rear diaphragm header, with two of the stems of each multi-stemmed floor being located on and contiguous with the side edges of the multi-stemmed floor and forming the edges of each multi-stemmed floor, the side edge of a multi-stemmed floor being configured to contact the side edge of another multi-stemmed floor to form a central joining edge of the coupled multi-stemmed floors to form a floor system, the stems of each multi-stemmed floor being the inner stems and the edge stems, the inner stems being between the two edge stems, the front inner stems each having a plurality of fifth wheel coupling bolt holes there through, the rear inner stems that are adjacent the side edge stems each have a plurality of suspension shackle mounting holes there through;

a plurality of rigid metallic suspension shackle mounting plates with each having a squared U-shaped configuration with each plate receiving and snugly fitting the downwardly projecting stem of the multi-stemmed floor, each of the plates having a bolt hole there through with the bolt hole being align able with the suspension shackle mounting bolt holes of the stems that are adjacent to the rear edge and side edge of the multi-stemmed floor, the wheel assembly also having a plurality of axles with a plurality of wheels being rotatably coupled to each of the axles, with each axle being coupled to a pair of parallel suspension springs and each suspension spring being coupled to one of a pair of suspension carrying plates, the suspension carrying plate being coupled to a plurality of suspension shackle mounting

plates, allowing the wheel assembly to be removably coupled to the multi-stemmed floor to allow the multi-stemmed floor to be trailed with a minimal road clearance sufficient to be used on all roadways without restriction;

a fifth wheel subassembly having a hitching portion for release-able attachment to a tractor hitch and an attachment portion for coupling with a multi-stemmed floor, the attachment portion having a plurality of rearward extending carrier beams, with each carrier beam having a plurality of rigid metallic suspension shackle mounting plates with each shackle mounting plate having a squared U-shaped configuration with each plate receiving and snugly fitting the downwardly projecting stem of the multi-stemmed floor, each of the mounting plates having a bolt hole there through with the bolt hole being align able with the fifth wheel coupling bolt holes of the front inner stems of the multi-stemmed floor, allowing the fifth wheel subassembly to be removably coupled to the multi-stemmed floor to allow the floor to be trailed with a minimal road clearance sufficient to be used on all roadways without restriction; and

a plurality of bolts to couple the multi-stemmed floor to the wheel assembly and the fifth wheel subassembly, thereby allowing the multi-stemmed floor to be pulled from one location to another with ease and safely.

19. A transportable pre-stressed concrete floor system comprising:

a pair of multi-stemmed concrete floors having a front diaphragm header and a rear diaphragm header and a plurality of downwardly disposed stems there between, the stems of each slab being a plurality of inner stems and two edge stems, the front inner stems each having a plurality of fifth wheel coupling bolt holes there through, the rear inner stems each have a plurality of suspension shackle mounting holes there through;

a wheel assembly having a plurality of rigid metallic suspension shackle mounting plates for removably coupling with the stems of the slab;

a fifth wheel subassembly having a tractor attachment portion and a stem attachment portion, the stem attachment portion having a plurality of rigid metallic suspension shackle mounting plates for removable coupling with the stems of the multi-stemmed floor;

a plurality of bolts to couple the stems of the multi-stemmed concrete floor system to the wheel subassembly and the fifth wheel subassembly.

20. The system as set forth in claim 19 wherein the fifth-wheel subassembly is a rectangular in shape with a coupler, the coupler having an L-shaped base for a releasable coupling to the multi-stemmed concrete floor, the coupler also having an apex with a downwardly extending kingpin for releasable coupling of the multi-stemmed concrete floor to a vehicle to thereby facilitate transportation.

21. A transportable pre-stressed concrete floor system comprising:

a pair of multi-stemmed concrete floors having a front diaphragm header and a rear diaphragm header and a plurality of downwardly disposed stems there between.

22. A transportable pre-stressed concrete floor system as described in Claim 21 wherein the system further comprises a wheel assembly for removably coupling with the stems of the slab.

23. A transportable pre-stressed concrete floor system as described in Claim 21 wherein the system further comprises a fifth wheel subassembly having a tractor attachment portion and a slab attachment portion for removable coupling with the stems of the multi-stemmed floor.

24. The system as set forth in Claim 21 and further including a jacking subassembly having support plate positioned between the stems adjacent to the rear edge with squared U-shaped regions for encompassing the stems, with attachment apertures formed in the stems and projections for a release able connection there between.

25. A pre-stressed multi-stemmed concrete floor manufacture station for allowing a user to make a pre-stressed multi-stemmed concrete floor in a safe and efficient manner, comprising, in combination:

a multi-stemmed concrete floor form table having a front end with an open front face and a rear end with an open rear face and two parallel side surfaces and a bottom surface and a long axis,

with the bottom surface having a plurality of downward projecting troughs, the troughs running the length of the table and meeting the front and rear open faces, with the downward projecting troughs being the molding walls for the formation of the downward projections of a multi-stemmed floor, also known as stems, the front and rear faces allowing the passage of a plurality of pairs of stressing cable holes there through;

a pair of trolley rails located on the front and rear end of the multi-stemmed concrete floor form table, the rails lying in line with the long axis of the multi-stemmed concrete floor form table and running up to the front surface and rear surface of the multi-stemmed concrete floor form table;

a pair of removable stressing head trolleys with each removable stressing head trolley having a plurality of rail wheels being mated with and received by the trolley rails, each removable stressing head trolley having a front face with a recess being a contact surface and a rear face being a non-contact surface and two parallel side surfaces and a bottom surface, each removable stressing head trolley comprising a stressing block having a first weight, the stressing block having a plurality of pairs of stressing cable apertures there through for receiving and containing a stressing cable, each removable stressing head trolley also having a plurality of stressing cable lock-downs, the lock-downs being coupleable to the stressing cable and coupleable to the trolley to prevent the removal of the stressing cable from within the cable apertures;

a removable stressing head coupled to each of the trolleys with each stressing head having a plurality of cable passageways there through, each stressing head also having a front flat surface nested within the front surface recess of each of the stressing head trolleys, the front flat surface coupling with a form table to form a diaphragm header trough, each stressing head also comprising a compressible filler assembly, the filler allowing the multi-stemmed concrete floor to shrink when put in compression by the stressing strands;

at least one cable jack having a stressing cable recipient aperture there through, with the cable jack having a stressing cable pulling and tensing means for placing a predetermined amount of tension in a cable.

26. A pre-stressed multi-stemmed concrete floor manufacture station comprising, in combination:

a multi-stemmed concrete floor form table having two sides and a bottom and a front end with an open front face and a rear end with an open rear face, the form table having a plurality of downward projecting troughs and a plurality of pairs of stressing cable holes there through;

a pair of trolley rails located on the front face and rear face of the multi-stemmed concrete floor form table;

a pair of removable stressing heads having a plurality of wheels that are mated with and received by the trolley rails, each removable stressing head containing a stressing block with a

plurality of pairs of stressing cable apertures there through; and

at least one cable jack having a pulling and tensing means for placing a predetermined amount of tension in a cable.

27. A Method for manufacturing a pre-stressed multi-stemmed concrete floor, comprising, in combination, the steps of:

providing a pre-stressed multi-stemmed concrete floor, form table having a front end with an open front face and a rear end with an open rear face the two parallel side surfaces and a bottom surface, the form table having a plurality of downward projecting longitudinal troughs, the longitudinal troughs running the length of the form table, the form table also having front and rear troughs, the longitudinal troughs meeting and connecting the front and rear troughs, with the downward projecting troughs being the molding walls for the formation of the downward projections of a pre-stressed multi-stemmed concrete floor, also known as stems, the front and rear faces allowing the passing of a plurality of pairs of stressing cable holes there through, the pre-stressed multi-stemmed concrete floor table being the form for receiving poured concrete there into;

providing a pair of trolley rails, the trolley rails being located on the front end and rear end of the pre-stressed multi-stemmed concrete floor form table, the rails lying in line with the long axis of the pre-stressed multi-stemmed concrete floor form table and running up to the front and rear faces of the pre-stressed multi-stemmed concrete floor form table;

providing a pair of removable stressing heads, each removable stressing heads having a plurality of rail wheels being mated with and received by the trolley rails, each removable stressing head having a front face being a contact surface and a rear face being a non-contact surface and two parallel side surfaces and a bottom surface, each removable stressing head having an associated stressing block having a first weight, the stressing block having a plurality of pairs of stressing cable apertures there through for receiving and containing a stressing cable, each removable stressing head also having a plurality of stressing cable lock-downs or chucks, the chucks being couple-able to the stressing cable and bearing on the stressing block of the removable stressing heads to prevent the removal of the stressing cable from within the cable apertures, with each removable stressing head being positioned in contact with the form table, one removable stressing head having its contact side in contact with the front face of the table and the other removable stressing head having its contact side in contact with the rear face of the table so that the stressing cable apertures of each removable stressing head are in alignment with the stressing cables of the table, with such positioning of the table and the removable stressing heads enabling a user to place a plurality of cables through the stressing block of the rear removable stressing head, through the table form and through the stressing block of the front removable stressing head;

providing a removable stressing head having a plurality of cable passageways there through;

providing a plurality of stressing cables, the cables being passed though the stressing block, through the stressing head, through the form table, through the opposite stressing head and the opposite stressing block;

providing a removable stressing head located at the front face of the diaphragm header forming trough, the stressing head having an associated compressible filler assembly, the compressible filler assembly configured to allow the multi-stemmed concrete floor to shrink when put in compression by the stressing strands;

providing a cable jack having a stressing cable recipient aperture there through, with the cable jack having a stressing cable pulling and tensing means for placing a predetermined amount of tension in a cable, the cable jack being position able on each stressing cable and then producing a first tension on each cable in a predetermined sequence, with the cable then being locked in place, the cable jack then being position able on each stressing cable and producing an additional tension on each cable, the cable being locked in place, and repeating the sequence until a desired tension is introduced to each cable; and

providing a quantity of pour-able concrete, the concrete being poured into the form table and then allowed to harden, the hardened concrete thereby forming a multi-stemmed pre-stressed concrete slab.

28. A Method for manufacturing a pre-stressed multi-stemmed concrete floor, comprising, in combination, the steps of:

providing a pre-stressed multi-stemmed concrete floor form table having a front end with an open front face and a rear end with an open rear face and two parallel side surfaces and a bottom surface the table having a plurality of downward projecting troughs, the table having a plurality of pairs of stressing cable holes there through;

providing a plurality of trolley rails;

providing a pair of removable stressing heads, each removable stressing head containing a stressing block, the stressing block having a plurality of pairs of stressing cable apertures there through, each removable stressing head also having a plurality of stressing cable lock-downs;

providing a removable stressing head, the head having a plurality of cable passageways there through;

providing a compressible filler;

providing a plurality of stressing cables;

providing a cable jack to produce a desired tension in each cable; and

providing a quantity of pour-able concrete, the concrete being poured into the form table and then allowed to harden, the hardened concrete thereby forming a pre-stressed multi-stemmed concrete floor.